

17515

23124

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data, if necessary.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) Attempt any THREE of the following : 12
- i) Write any four primitive data types available in Java with their storage sizes in bytes.
 - ii) What are stream classes ? List any two input stream classes from character stream.
 - iii) What is Byte code ? Explain any two tools available in JDK.
 - iv) What is Exception ? How it is handled ? Explain with suitable example.
- b) Attempt any ONE of the following : 6
- i) Define constructor ? Demonstrate the use of parameterized constructor with a suitable example.
 - ii) Write stepwise procedure to create a user defined package with an example.

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- 2. Attempt any TWO of the following :** **16**
- a) What is array of objects ? Define a class “Employee” with data members empid, name and salary. Accept data for 5 objects using array of objects and print it.
 - b) What is an interface ? State it’s need ? And also write a suitable program to explain the use of interface.
 - c) Give the syntax of following methods of graphics class. Explain their use with suitable program.
 - i) drawLine()
 - ii) drawRect()
 - iii) drawString()
 - iv) drawPolygon()
- 3. Attempt any FOUR of the following :** **16**
- a) Describe following string class methods with example.
 - i) length()
 - ii) equals()
 - iii) charAt()
 - iv) compareTo()
 - b) Write a program to check the entered number is prime or not.
 - c) Write any two methods of file and file input stream class each.
 - d) Describe any four methods from graphics class.
 - e) Differentiate between method overloading and method overriding.
- 4. a) Attempt any THREE of the following :** **12**
- i) What is garbage collection in Java? Explain.
 - ii) Describe life cycle of thread with neat diagram.
 - iii) Explain implicit and explicit typecasting with suitable example.'
 - iv) Enlist any four compile time error with an example.

- b) **Attempt any ONE of the following :** **6**
- i) Write syntax and example of –
 - (1) drawString()
 - (2) drawOval()
 - (3) drawArc()
 - ii) Write a program to create a vector, with seven elements as (10, 30, 50, 20, 40, 10, 20). Remove element of 3rd and 4th position. Insert new element as 3rd position. Display the current size of the vector.
5. **Attempt any TWO of the following :** **16**
- a) Write a program to throw a user defined exception as “Invalid Age” if age entered by the user is less than eighteen. Also mention any two common java exceptions and their cause.
 - b) Write a program to define two threads, one thread will print 1 to 10 numbers whereas other will print 10 to 1 numbers.
 - c) Explain life cycle of an applet what methods are used in it ?
6. **Attempt any FOUR of the following :** **16**
- a) What are the applications of wrapper classes ? Explain integer wrapper classes.
 - b) Write any two methods of file and file input stream class each.
 - c) Write a program to implement multilevel inheritance.
 - d) Design a package containing a class which defines a method to find area of a rectangle. Import it in a java application to calculate area of a rectangle for a given length and breadth.
 - e) Write a program to create and sort all integer array.
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